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| 10/677,436 | 10/02/2003 | Lifeng Zhang | A01449 | 9011 |
| 21898 7590 05/16/2008 ROHM AND HAAS COMPANY PATENT DEPARTMENT 100 INDEPENDENCE MALL WEST PHILADELPHIA, PA 19106-2399 | | | | |
| EXAMINER | | | | |
| MAIER, LEIGH C | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 1623 | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/677,436

Applicant(s)

ZHANG, LIFENG

Examiner

Leigh C. Maier

Art Unit

1623

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4 and 6-24 is/are pending in the application.
- 4a) Of the above claim(s) 4 and 6-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 10-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Status of the Claims

Claims 1, 2, 4 and 6-24 are pending. Claims 4 and 6-9 are withdrawn as being drawn to a non-elected invention. Any objection or rejection not expressly repeated has been withdrawn. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Applicant's arguments with respect to the claims have been considered and will be addressed insofar as they apply to the new grounds of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 16 and 17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that Applicant, at the time the application was filed, had possession of the claimed invention.

These claims were added by pre-amendment after filing. Each of the claims contains a limitation regarding "the lower limit of the hydrophobe types." The examiner does not find support for these claims. This limitation is discussed at paragraph [0024]. However, these claims depend from claim 13 which requires a hydrophobically modified aminoplast polyether

copolymer thickener, whereas the discussion in paragraph [0024] is limited to the use of a hydrophobically modified polyethoxylated urethane thickener.

Claim Rejections - 35 USC § 102

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Eisenhart et al (US 5,137,571) with Onwumere et al (US 5,354,808) to support inherency.

Eisenhart discloses a composition comprising a hydrophobically modified polyethoxylated urethane thickener (QR-708) and a cyclodextrin. See examples 1-6. In the arguments filed February 20, 2008, Applicant states that this reference “fails to teach or suggest a hydrophobically modified polyethoxylated urethane thickener comprising a urethane linkage formed from any of the diisocyanates [sic] listed in instant claim 1.” However, it is further noted that in the arguments filed September 6, 2007, Applicant states that “QR-708, like the thickener disclosed in Lau, is based on H₁₂MDI.” The abbreviation “H₁₂MDI” appears to be typically used for 4,4'-methylenebis(isocyanatocyclohexane). The instant specification uses the trade name “Des W.” See paragraph [0023]. See Onwumere at col 1, lines 32-34; col 10, lines 1-8; and col 15, lines 29-33.

Claim Rejections - 35 USC § 103

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eisenhart et al (US 5,137,571) in view of Emmons et al (US 4,079,028).

Eisenhart teaches as set forth above. The reference teaches the use of cyclodextrins in combination with hydrophobically modified polyethoxylated urethane thickeners, generally, and

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further discloses that these thickeners are known and disclosed by Emmons. See col 1, 59-62.

The reference does not exemplify all the thickeners based on the full range of diisocyanates recited.

Emmons teaches the preparation of hydrophobically modified polyethoxylated urethane thickeners using a variety of diisocyanates. See paragraph bridging col 8-9.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to select any of the hydrophobically modified polyethoxylated urethane thickeners taught by Emmons with a reasonable expectation of success because Eisenhart suggests their use.

Claims 10-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eisenhart et al (US 5,137,571) in view of Glancy et al (US 5,914,373).

Eisenhart teaches as set forth above. The reference teaches the general concept of using a variety of cyclodextrins in combination with hydrophobically modified associative thickeners to eliminate the use of organic cosolvents and surfactants necessary to prepare aqueous compositions. See col 1, lines 18-51. Typical of such an aqueous composition is latex paint. See col 2, lines 25-47. The reference further teaches various amounts of the cyclodextrins and thickener. See paragraph bridging col 4-5 and examples. The reference does not teach the use of a hydrophobically modified aminoplast polyether copolymer thickener.

Glancy teaches the use of hydrophobically modified aminoplast polyether copolymers, which function as associative thickeners, for use in aqueous compositions such as latex paint. The compositions may be prepared using water-immiscible solvent and surfactants. See col 20,

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lines 21-40 and col 23-24. The reference further suggests a functional equivalence with other associative thickeners, such as polyurethane-based ones. See col 4, lines 5-10.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the compositions of Eisenhart by the substitution of a hydrophobically modified aminoplast polyether copolymer as the associative thickener with a reasonable expectation of success because Glancy had suggested the functional equivalence of the thickeners in the preparation of aqueous compositions, such as paint. It would be within the scope of the artisan to optimize the amounts of the various components for the particular application through routine experimentation.

Examiner's hours, phone & fax numbers

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leigh Maier whose telephone number is (571) 272-0656. The examiner can normally be reached on Tuesday, Thursday, and Friday 7:00 to 3:30 (ET).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Anna Jiang (571) 272-0627, may be contacted. The fax number for Group 1600, Art Unit 1623 is (571) 273-8300.

Visit the U.S. PTO's site on the World Wide Web at <http://www.uspto.gov>. This site contains lots of valuable information including the latest PTO fees, downloadable forms, basic search capabilities and much more. Information regarding the status of an application may be obtained from the Patent Application Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov> Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.

/Leigh C. Maier/
Primary Examiner, Art Unit 1623
May 15, 2008